

Amendments to the Claims

The following listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

Claims 1-11 (cancelled).

Claim 12 (original): A method for forming a binary liquid crystal mixture with a V-shaped switching electro-optic response, said method comprising:

providing an achiral swallow-tailed compound; and

doping a ferroelectric liquid crystal material with said achiral swallow-tailed compound to generate a binary ferroelectric liquid crystal mixture, wherein said binary ferroelectric liquid crystal mixture with a ferroelectric phase, and displaying a V-shaped switching electro-optic response in said ferroelectric phase.

Claim 13 (original): The method according to Claim 12, wherein said achiral swallow-tailed compound comprises 2-propylpentyl 4-(4'-nonyloxybiphenyl-4-carbonyloxy) benzoate.

Claim 14 (original): The method according to Claim 12, wherein said ferroelectric liquid crystal material comprises 1-ethylpropyl (S)-2-[2-fluoro-4-(4'-decyloxybiphenylcarbonyloxybenzoyl)propanoate.

Claim 15 (New): A method for forming a binary liquid crystal mixture with V-shaped switching electro-optic response, said method comprising:

providing an achiral swallow-tailed compound; and

doping a liquid crystal material with said achiral swallow-tailed compound to generate a binary liquid crystal mixture, wherein said binary liquid crystal mixture with a phase and displaying a V-shaped switching electro-optic response in said phase.

Claim 16 (New): The method according to Claim 15, wherein said achiral swallow-tailed compound is 2-propylpentyl-4-(4'-decyloxybiphenyl-4-carbonyloxy)benzoate.

Claim 17 (New): The method according to Claim 15, wherein said achiral swallow-tailed compound is 2-propylpentyl 4-(4'-nonyloxybiphenyl-4-carbonyloxy)benzoate.

Claim 18 (New): The method according to Claim 15, wherein said liquid crystal material is a ferroelectric liquid crystal material.

Claim 19 (New): The method according to Claim 18, wherein said ferroelectric liquid crystal material is 1-ethylpropyl (S)-2-[2-fluoro-4- (4'-decyloxybiphenylcarbonyloxybenzoyl)propanoate.

Claim 20 (New): The method according to Claim 15, wherein said liquid crystal material is an antiferroelectric liquid crystal material.

Claim 21 (New): The method according to Claim 20, wherein said antiferroelectric liquid crystal material is (S)-4-(1-methylheptyloxy)carbonylphenyl 4'-octyloxy-4-biphenylcarboxylate.

Claim 22 (New): The method according to Claim 15, wherein said binary liquid crystal mixture is a binary ferroelectric liquid crystal mixture.

Claim 23 (New): The method according to Claim 15, wherein said binary liquid crystal mixture is a binary antiferroelectric liquid crystal mixture.

Claim 24 (New): The method according to Claim 15, wherein said phase is a ferroelectric phase.

Claim 25 (New): The method according to Claim 15, wherein said phase is an antiferroelectric phase.